SANTA WATER AND SEWER DISTRICT (PWS# 1050023)
SOURCE WATER ASSESSMENT REPORT

March 24, 2003

State of Idaho
Department of Environmental Quality

Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This risk assessment is based on a land use inventory in the well recharge zone, sensitivity factors associated with how the well was constructed, and aquifer characteristics.

This report, *Source Water Assessment for the Santa Water and Sewer District*, describes the public drinking water well; the well recharge zone and potential contaminant sites located inside the recharge zone boundaries. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this public water system. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

Santa Water and Sewer District operates a community water system serving 150 people in the town of Santa, Idaho. Surrounded by the Clearwater National Forest and beside the St. Maries River Santa is located in the southeastern portion of Benewah County. Drinking water is supplied by a 152-foot deep well at the mouth of a draw northeast of town. Air testing at the time of drilling produced a discharge of 360 gallons per minute. An older well closer to town that has been inoperable for several years remains connected to the system.

A ground water susceptibility analysis conducted by the Idaho Department of Environmental Quality on February 6, 2003, ranked Well #2, the main supply, at high risk for microbial contamination because its sampling history. The risk relative to other classes of regulated contaminants is moderate, mostly because of natural geologic conditions at the well site. Well #1 was not assessed because it has not been maintained or monitored as an active source, but limited descriptions of its construction and conditions at the well site are included in this report.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

With the microbial contamination problem dealt with by installation of a chlorinator, continuing to operate, maintain and monitor Well #2 in compliance with the *Idaho Rules for Public Drinking Water Systems* is probably the most important drinking water protection available to Santa Water and Sewer District. The system should develop a water emergency response plan. In planning for future needs, the system should look for alternatives to Well #1. Methods used to construct the well in 1967 are substandard, and the well produced water contaminated with sand and silt. It would need to be repaired, evaluated for surface water influence and monitored before it can be used again.

Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. For assistance in developing protection strategies, please contact your regional Department of Environmental Quality office or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR SANTA WATER AND SEWER DISTRICT

Section 1. Introduction - Basis for Assessment

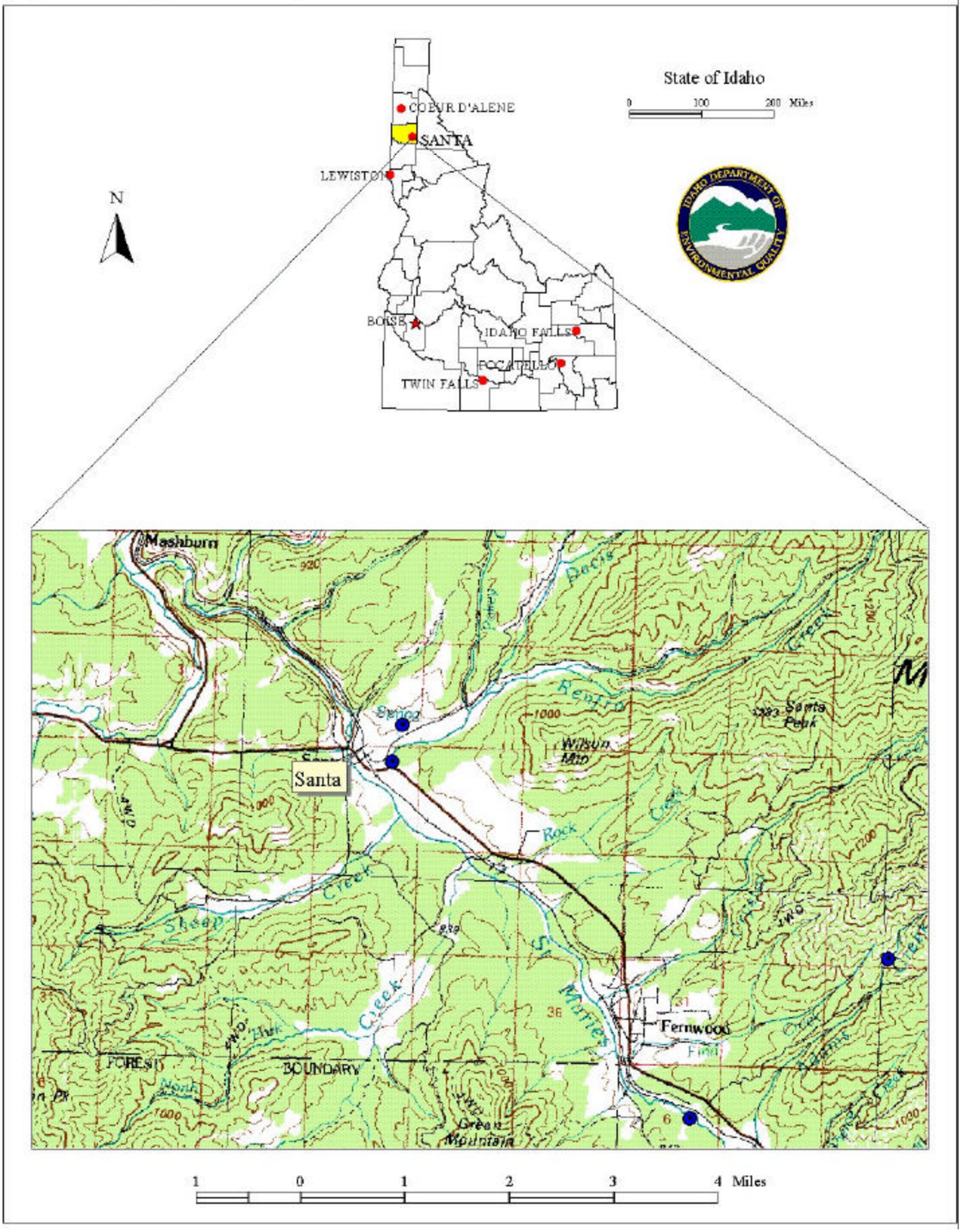
The following sections contain information necessary for understanding how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and an inventory of significant potential sources of contamination identified within that area are included. The ground water Susceptibility Analysis Worksheet used to develop this assessment is attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess every public drinking water source in Idaho for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. These assessments are based on a land use inventory inside the delineated recharge zones, sensitivity factors associated with how the well is constructed, and aquifer characteristics. The state must complete more than 2900 assessments by May of 2003. Because resources and the time available to accomplish assessments are limited, an in-depth, site-specific investigation for every public water system is not possible.

The results of the source water assessment should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system. The ultimate goal of this assessment is to provide data to local communities for developing a protection strategy for their drinking water supply. The Idaho Department of Environmental Quality recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Figure 1. Geographic Location of Santa



Section 2. Preparing for the Assessment

Defining the Zones of Contribution - Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the well recharge area into time of travel zones indicating the number of years necessary for a particle of water flowing through the aquifer to reach a well. The ground water flow model used data DEQ assimilated from a variety of sources including local well logs and pumping volume estimates for the Santa Water and Sewer District wells.

Santa Water and Sewer District operates a community water system with 33 connections serving a population of 75 year round residents in the unincorporated town of Santa about 35 miles southeast of St Maries (Figure 1). The population increases to about 200 during the summer. The well is 130 feet deep and produced 80 to 100 gallons per minute during a 24-hour air test at the time of drilling. The ground water flow model WhAEM2000 was used to delineate 3-, 6-, and 10-year capture zones for the Santa wells (Figure2).

Initial estimates of hydraulic conductivity and aquifer thickness were based on well logs and specific capacity data. The initial estimates of model parameters and boundaries were adjusted as necessary to best replicate observed water-level measurements. Because of the inherent uncertainty in ground water modeling the input parameters were varied to evaluate the effect on capture zone geometry. In some cases, the final capture zone was a composite of the various simulations run for each model.

The extent of the water producing basalt that the Santa wells draw from was determined using surficial geologic maps and local well logs. The extent of the basalt was used as the no flow boundary for the model simulations. Well logs in the Santa locality showing areas where the producing zones were not in basalt supported these no flow boundaries. A local well log for a well of similar depth and lithology was used as a test point. A constant head boundary set at the river level was used to constrain the water table downgradient. Hydraulic conductivity was varied from 15 to 30 feet per day, The aquifer thickness was varied from 15 to 30 feet, porosity was set at 0.1, and recharge was varied from 0.45 to 0.88 inches per year to provide the water necessary to support the various pumping simulations.

Identifying Potential Sources of Contamination

The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. Inventories for all public water systems in Idaho were conducted in two-phases. The first phase involved identifying and documenting potential contaminant sources within a system's source water assessment area through the use of computer databases and Geographic Information System maps developed by DEQ. Maps showing the delineations and tables summarizing the results of the database search were then sent to system operators for review and correction during the second or enhanced phase of the inventory process. Information from the public water system file was also incorporated into the potential contaminant/land use inventory.

Figure 2, *Santa Water and Sewer District Delineation and Potential Contaminant Inventory* of this report shows the location of the Santa Water and Sewer District well, the zone of contribution DEQ delineated for it, and potential contaminant sites in the vicinity. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. When a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation.

Section 3. Susceptibility Analysis

The susceptibility to contamination of all ground water sources in Idaho is being assessed on the following factors:

- physical integrity of the well,
- hydrologic characteristics,
- land use characteristics, and potentially significant contaminant sources
- historic water quality

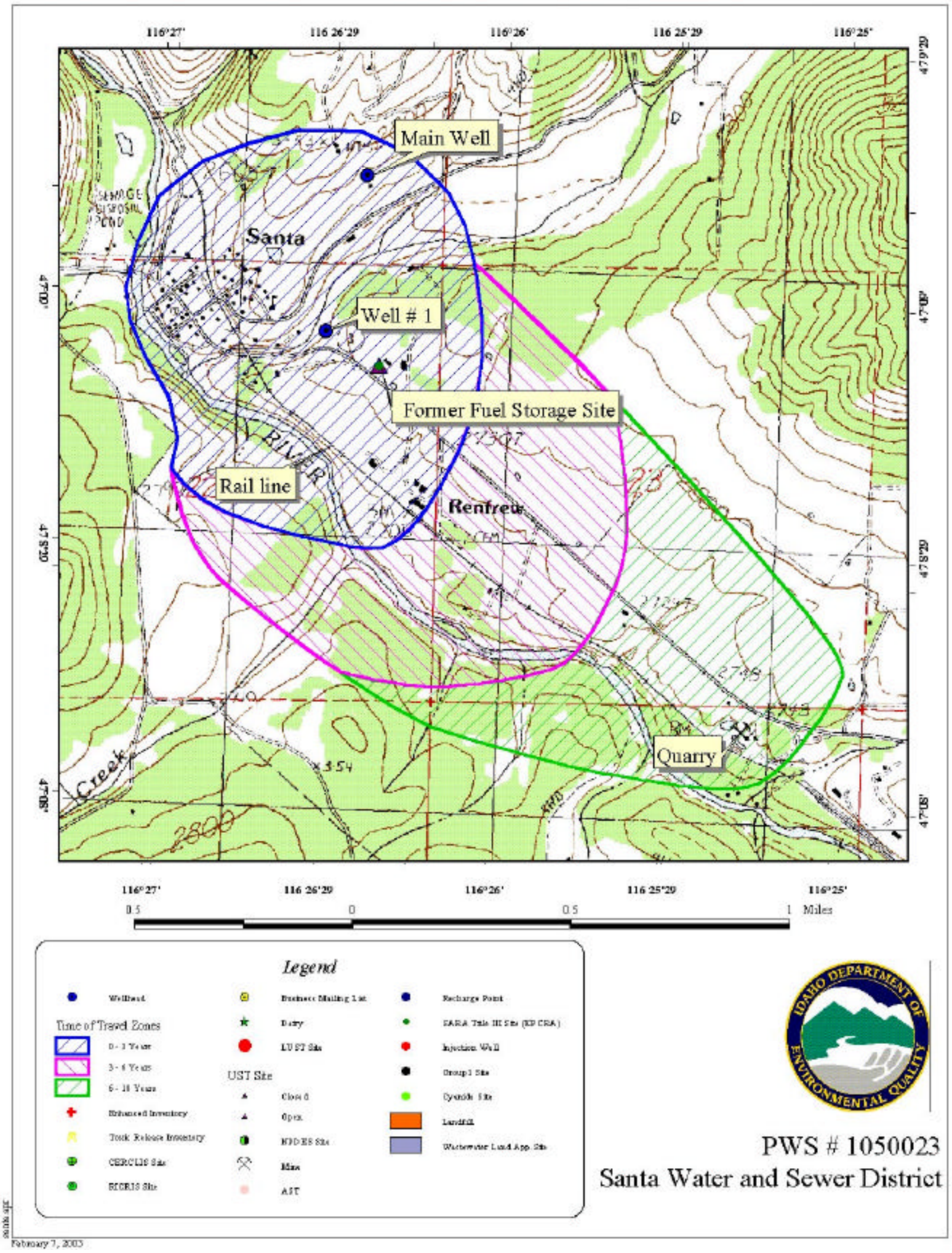
The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. A high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking. The Susceptibility Analysis Worksheet for the Santa Water and Sewer District Well #2, Attachment A, shows in detail how the well was scored. Because Well #1 has not been monitored and maintained as an active source for several years there is insufficient current information available for a meaningful susceptibility analysis. The well would need to be repaired, evaluated for possible surface water influence, and the quality of its water tested before it could be used again as a back up source.

Well Construction

Well construction directly affects the ability of the wells to protect the aquifer from contaminants. Lower scores imply a well that can better protect the water. This portion of the susceptibility analysis relies on information from individual well logs and from the most recent sanitary survey of the public water system. The driller's report for Well #2 is on file with DEQ. The well log for Well #1 was found in a search of Idaho Department of Water Resources records, but the information it contains is incomplete. Santa's water system was last inspected in April 2001. Deficiencies noted on the survey were repaired by the end of June 2001.

Well #2, the main source for Santa, was drilled in May 1978 to a depth of 152 feet. Except for a minor variation in the casing wall thickness the well meets current Idaho Department of Water Resources well construction standards. The 8-inch steel casing extends from a foot above ground to a depth of 151 feet and is perforated from 87 to 142 feet below the surface. The casing and 20-foot deep surface seal both terminate in material the well log describes as soft rotten basalt. Static water level is 72 feet below ground. The well is above the flood plain for Renfro Creek and was determined to be ground water without surface water influence following a site inspection in 1995.

Figure 2. Santa Water and Sewer District Delineation and Potential Contaminant Inventory.



Well Construction continued

Formerly used as a back up source, Well #1 produced an estimated 25 gallons per minute, but the water contained sand and sediment. Sanitary surveys in 2001 and 1995 report that this well is still connected to the distribution system but yields no water when the pump is started. Pump failure, leakage or an improper valve configuration are possible causes of the lack of water. Well #1 was drilled in1967and is 243 feet deep. The 6-inch steel casing reaches from the surface to about 190 feet, terminating at the interface between a sandy clay stratum and basalt. The remaining depth of the well bore is free standing in basalt and granite. The static water level is 46 feet below ground. Well construction details like the casing wall thickness, sealing procedure and capacity testing are poorly documented on the well log.

Hydrologic Sensitivity

Hydrologic sensitivity scores reflect natural geologic conditions at the well site and in the recharge zone. Information for this part of the analysis is derived from individual well logs and from the soil drainage classification inside the delineation boundaries. The Santa Water and Sewer District Well #2 scored 6 points out of 6 points possible in the hydrologic sensitivity portion of the susceptibility analysis.

Soils in the recharge zone generally are moderately well drained to well drained. Soils in these drainage classifications are less protective of ground water than slowly draining soils since they do not inhibit the migration of contaminants toward the well.

The driller's report for Well #2 shows three feet of clay at the surface covering 149 feet of soft, fractured basalt. Air testing at the time of drilling produced an estimated discharge of 360 gallons per minute.

Hard basalt with thick clay interbeds and some sand characterized the soil profile in Well #1. With a cumulative thickness of more than 50 feet, the clay interbeds constitute an aquitard that in a properly constructed well provides some protection against vertical transport of contaminants. The well log shows a small amount of water coming from a medium basalt stratum 190 to 220 feet below the surface with the highest production from a granite stratum 241 to 243 feet under ground.

Potential Contaminant Sources and Land Use

Figure 2, *Santa Water and Sewer District Delineation and Potential Contaminant Inventory* shows the location of the Santa Water and Sewer District wells and potential sources of contamination documented inside the recharge zone. The town of Santa lies entirely inside the 0-3 year time of travel zone. Sewage disposal ponds are outside of the delineation boundaries. All zones are crossed by roads and a rail line that are potential sources of contamination not only from petroleum products and spills due to accidents, but road and right of way maintenance chemical as well. A bulk fuel storage tank that is no longer in use is in the 0-3 year time of travel zone. A stone quarry in the 6-10 year time of travel zone is unlikely to be a source of contaminants unless it is used as a dumpsite.

Historic Water Quality

Repeated episodes of total coliform bacteria contamination prompted Santa Water and Sewer District to install a chlorinator in January 2001. Bacteria were present in samples from Well #2 and distribution system in 1996 and 1997. The presence of total coliform in the well itself automatically results in the source being ranked highly susceptible to microbial contamination.

The solvent and metal degreaser Tetrachloroethene (Maximum contaminant Level = 5.0 µg/l) was detected in a sample from Well #1 at a concentration 0.65 µg/l in March 1991. Tetrachloroethene was not detected when the well was retested for volatile organic chemicals in 1993. No monitoring has been done since then on this source. When it was in use, Well #1 produced water containing sand and sediment. Because it is in the flood plain and only 100 feet from Renfro Creek Well #1 needs to be evaluated for possible surface water influence if Santa plans to start using it again. The system's chemical and radiological sampling history is summarized on the table below.

Table 1. Santa Water and Sewer District Sampling Results

Primary IOC Contaminants (Mandatory Tests)							
Contaminant	MCL (mg/l)	Results (mg/l)	Dates	Contaminant	MCL (mg/l)	Results (mg/l)	Dates
Antimony	0.006	ND	1/31/97, 3/7/01, 11/14/01	Nitrate	10	ND to 0.297	10/29/80 through 12/17/02
Arsenic	0.01	ND	10/29/80, 1/31/97, 3/7/01, 11/14/01	Nickel	N/A	ND	1/31/97, 3/7/01, 11/14/01
Barium	2.0	ND to 0.1	10/29/80, 1/31/97, 3/7/01, 11/14/01	Selenium	0.05	ND	10/29/80, 1/31/97, 3/7/01, 11/14/01
Beryllium	0.004	ND	1/31/97, 3/7/01, 11/14/01	Sodium	N/A	4.0 to 6.6	12/8/86, 1/31/97, 3/7/01, 11/14/01
Cadmium	0.005	ND	10/29/80, 1/31/97, 3/7/01, 11/14/01	Thallium	0.002	ND	1/31/97, 3/7/01, 11/14/01
Chromium	0.1	ND	10/29/80, 1/31/97, 3/7/01, 11/14/01	Cyanide	0.02	ND	No test results available
Mercury	0.002	ND	10/29/80, 1/31/97, 3/7/01, 11/14/01	Fluoride	4.0	0.14 to 0.23	10/29/80, 1/31/97, 3/7/01, 11/14/01

Regulated and Unregulated Synthetic Organic Chemicals		
Contaminant	Results	Dates
29 Regulated and 13 Unregulated Synthetic Organic Compounds	None Detected	8/26/93, 10/16/98, 11/14/01

Regulated and Unregulated Volatile Organic Chemicals		
Contaminant	Results	Dates
21 Regulated And 16 Unregulated Volatile Organic Compounds	None Detected Except As Listed Below	3/29/91, 8/26/93, 9/13/93, 11/14/01
Tetrachloroethene (MCL = 5.0 µg/l)	Well #1 0.65 µg/l ND	3/29/91 8/26/93

Radiological Contaminants			
Contaminant	MCL	Results	Dates
Gross Alpha, Including Ra & U	15 pC/l	Well #1: 0.2 pCi/l Well #2: 0.8, 3.8 pCi/l Distribution: ND, 0.1 pCi/l	5/6/93 1/30/97, 10/29/97 6/30/80, 4/1/01
Gross Beta Particle Activity	4 mrem/year 50 pCi/l	Well #1 2.0 mrem Well #2: 2.2, 3.6 mrem Distribution: 3.8 mrem, 3.2 pCi/l	5/6/93 1/30/97, 10/29/97 6/30/80, 4/1/01

Final Susceptibility Ranking

The Santa Water and Sewer District Well #2 automatically ranked highly susceptible to microbial contamination because of the detection of total coliform bacteria in samples drawn at the wellhead. The district has already dealt with this problem by installing a chlorinator. Susceptibility to other classes of regulated contaminants is moderate. Risks factors related to local geology added the most points to the final susceptibility scores. Total scores for system construction and hydrologic sensitivity along with the cumulative scores for land use and potential contaminant sites are shown on Table 2. The complete Susceptibility Analysis Worksheet for the Santa Water and Sewer District Well #2 can be found in Attachment A

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score =
   Hydrologic Sensitivity + System Construction + (Potential Contaminant & Land Use x 0.2)

2) Microbial Final Score =
   Hydrologic Sensitivity + System Construction + (Potential Contaminant & Land Use x 0.35)

The final ranking categories are as follows:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- > 13 High Susceptibility.

Table 2. Summary of Santa Water and Sewer District Susceptibility Evaluation

Cumulative Susceptibility Scores						
Well Name	System Construction 0-6 possible	Hydrologic Sensitivity 0-6 possible	Contaminant Inventory plus Land Use			
			IOC 0-30 possible	**VOC** 0-30 possible	**SOC** 0-30 possible	**Microbial** 0-14 possible
Well #2	3	6	5	8	8	4

Final Susceptibility Scores/Ranking				
Well Name	IOC 0-18 possible	VOC 0-18 possible	SOC 0-18 possible	Microbial 0-15 possible
Well #2	10/Moderate	11/Moderate	11/Moderate	*High

Low numbers are favorable. because high scores indicate increased susceptibility to contaminants
IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical
*High due to detection of total coliform bacteria in sample from well 5/8/96

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Continuing to operate, maintain and monitor the well in full compliance with the *Idaho Rules for Public Drinking Water Systems* is probably the best drinking water protection tool available to Santa Water and Sewer District. The well is located outside of town where there is little activity that could influence water quality. The area around the well and reservoirs is fenced and should be kept locked to discourage unauthorized access. A voluntary measure every system should adopt is development of a water emergency response plan. There is a simple form available on the DEQ website to guide systems through the planning process. In planning for future needs, the system should analyze the capacity of the main well and storage facilities along with expected demands on the water supply. It may be less expensive to provide standby equipment for the main well than to repair, test and maintain Well #1.

Assistance

Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments. Water systems serving fewer than 10,000 people source water protection planning help from Melinda Harper of the Idaho Rural Water Association.

Idaho Department of Environmental Quality

Coeur d'Alene Regional IDEQ Office	(208) 769-1422
State IDEQ Office, Boise	(208) 373-0502
Website:	http://www.deq.state.id.us/

Idaho Rural Water Association

Melinda Harper, Groundwater Protection Specialist	(800) 962-3257
Website:	http://www.idahoruralwater.com

Idaho Association of Soil Conservation Districts

Water quality and soil conservation	(208) 338-5900
Website:	http://www.iascd.state.id.us/

References Cited

1. Freeze, R.A., and J.A. Cherry, 1979, Groundwater, Prentice-Hall, Inc., 604 p.
2. Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. "Recommended Standards for Water Works."
3. Idaho Department of Environmental Quality, 1997. Design Standards for Public Drinking Water Systems. IDAPA 58.01.08.550.01.
4. Idaho Division of Environmental Quality, 1999, Idaho Source Water Assessment Plan, October, 39 p.
5. Idaho Division of Environmental Quality, 1997, Idaho Wellhead Protection Plan, Idaho Wellhead Protection Work Group, February.
6. Idaho Department of Water Resources, 1993. Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules. IDAPA 37.03.09.
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Attachment A

Santa Water and Sewer District
Susceptibility Analysis Worksheet

Ground Water Susceptibility

Public Water System Name : **SANTA WATER AND SEWER DIST** Source: **WELL #2 (MAIN)**

Public Water System Number : **1050023** 2/6/03 10:41:05 AM

1. System Construction		SCORE			
Drill Date	5/1/78				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	2001			
Well meets IDWR construction standards	YES	0			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		**3**			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		**6**			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)		Score	Score	Score	Score
Land Use	URBAN	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	NO	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A		**2**	**2**	**2**	**2**
Potential Contaminant / Land Use - ZONE 1B (3 YR. TOT)					
Contaminant sources present (Number of Sources)	YES	1	2	2	1
(Score = # Sources X 2) 8 Points Maximum		2	4	4	2
Sources of Class II or III leacheable contaminants or Microbials	YES	1	2	2	
4 Points Maximum		1	2	2	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		**3**	**6**	**6**	**2**
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Land Use Zone II		0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		**0**	**0**	**0**	**0**
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		**0**	**0**	**0**	**0**
Cumulative Potential Contaminant / Land Use Score		**5**	**8**	**8**	**4**
4. Final Susceptibility Source Score		**10**	**11**	**11**	**11**
5. Final Well Ranking		Moderate	Moderate	Moderate	***HIGH**

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ? Superfund? is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.